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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,950	02/20/2002	Reid R. Harrison	40022.002	7806

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KENNETH E. HORTON
RADER, FISHMAN & GRAUER PLLC
RIVERPARK CORPORATE CENTER ONE
10653 SOUTH RIVERFRONT PARKWAY, SUITE 150
SOUTH JORDAN, UT 84095

EXAMINER	
MOTTOLA, STEVEN J	
ART UNIT	**PAPER NUMBER**
2817	

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/09 50	Applicant(s) Harrison
	Examiner MOTTOLA	Group Art Unit 2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-32 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-32 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

The disclosure is objected to because of the following informalities: the use of the term "mHz" in the specification, abstract and claim 1 could easily be confused with "MHz"; the desired frequency range should be more clearly defined where this term is used.

Appropriate correction is required.

Claims 15 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 specifies the functions of the MOS transistor "with a positive voltage" and "with a negative voltage"; it is not clear from the claim how these voltages are in control of the operation of the MOS transistor.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14,16,17 and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgartner et al. in view of Mastrocola.

Baumgartner et al. disclose a biomedical amplifier circuit in a wide variety of embodiments and uses. One of the concerns of Baumgartner et al. is DC offset voltages (col. 1, lines 65-66) for biomedical amplifiers at low frequencies (col. 2, lines 13-19) less than 500 Hz. The amplifier is an

integrated circuit (chip) 100 as shown for instance in fig. 3 including an A/D converter stage 746 with an offset correction feedback loop as shown in detail fig. 6 that includes resistors 746,748. The main difference between most of the claims and Baumgartner et al is the use of MOS pseudo resistors claimed, where Baumgartner shows conventional resistors. However, the use of such pseudo resistors in differential amplifiers is known for instance from Mastrocola in fig. 1 for instance where a switched MOSFET M3 acts as a pseudo resistor (col. 5, lines 30-32 of Mastrocola) to maintain the desired offset V(delta) across the inputs of differential amplfier 14. It may be a p-channel device as claimed (col. 3, line 28). It would have been obvious to utilize such a pseudo resistor for the on chip resistors of Baumgartner et al., in order to facilitate easier integration. Other differences between the claims and Baumgartner et al. relate to specific ranges or values of offset voltage, noise levels, frequency range, input signal source, etc. These would all be determined by the specific intended use at hand. The use of two resistors in series would not of itself be significant unless a functional connection to a node therebetween were claimed. The reduction of offset itself could be read as the reduction of nonlinear distortion of some claims.

Any inquiry concerning this communication should be directed to Mr. Mottola at telephone number 308-4914.

Steven J. Mottola
Primary Examiner